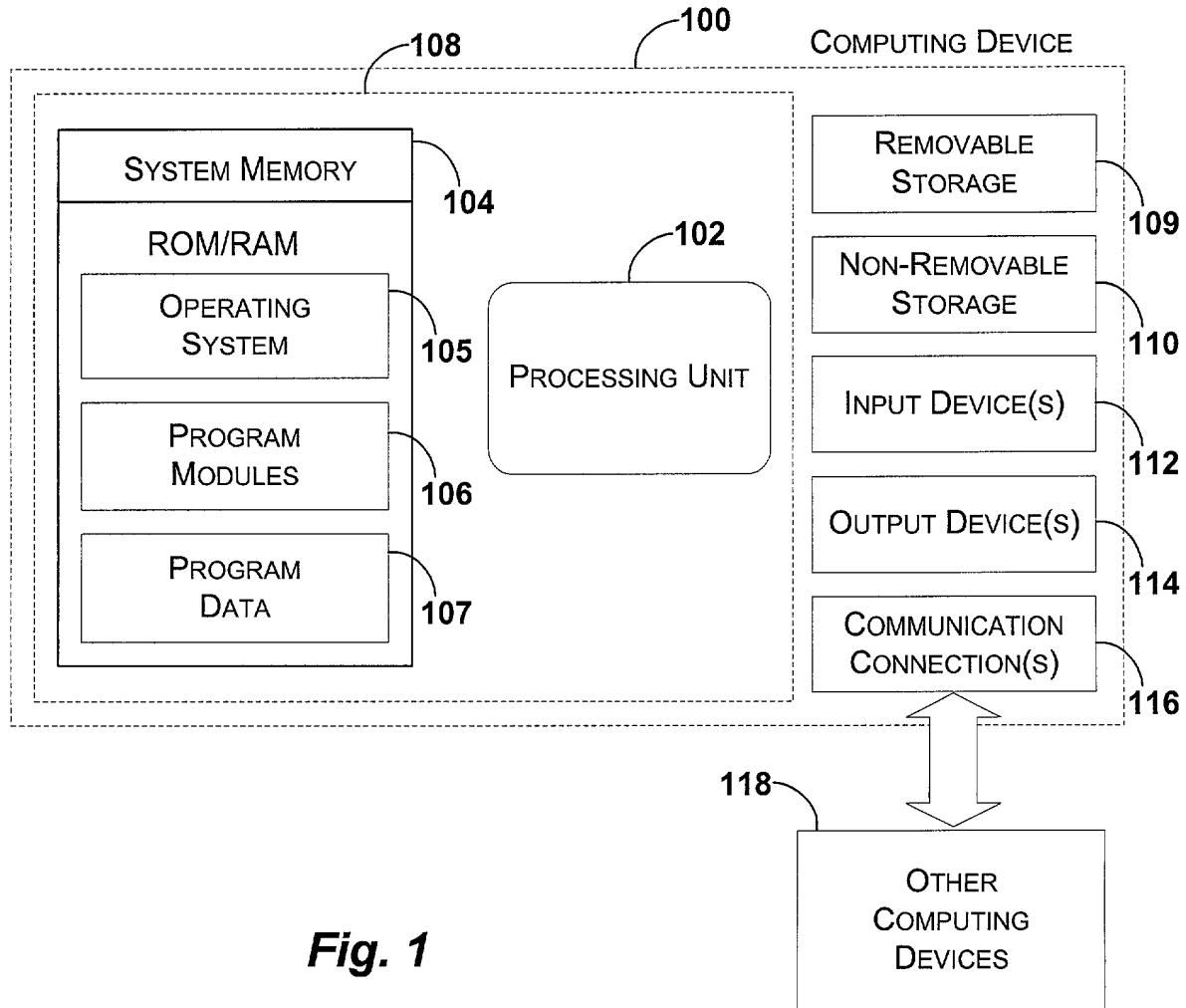
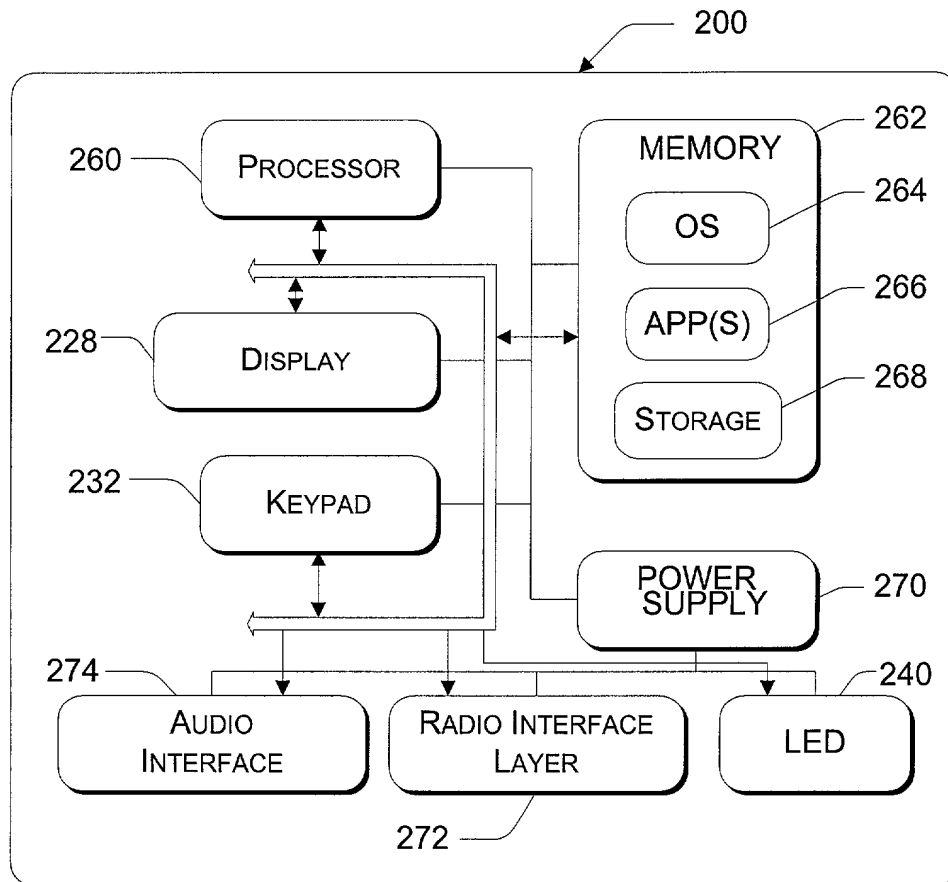


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**Fig. 1**

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**Fig. 2**

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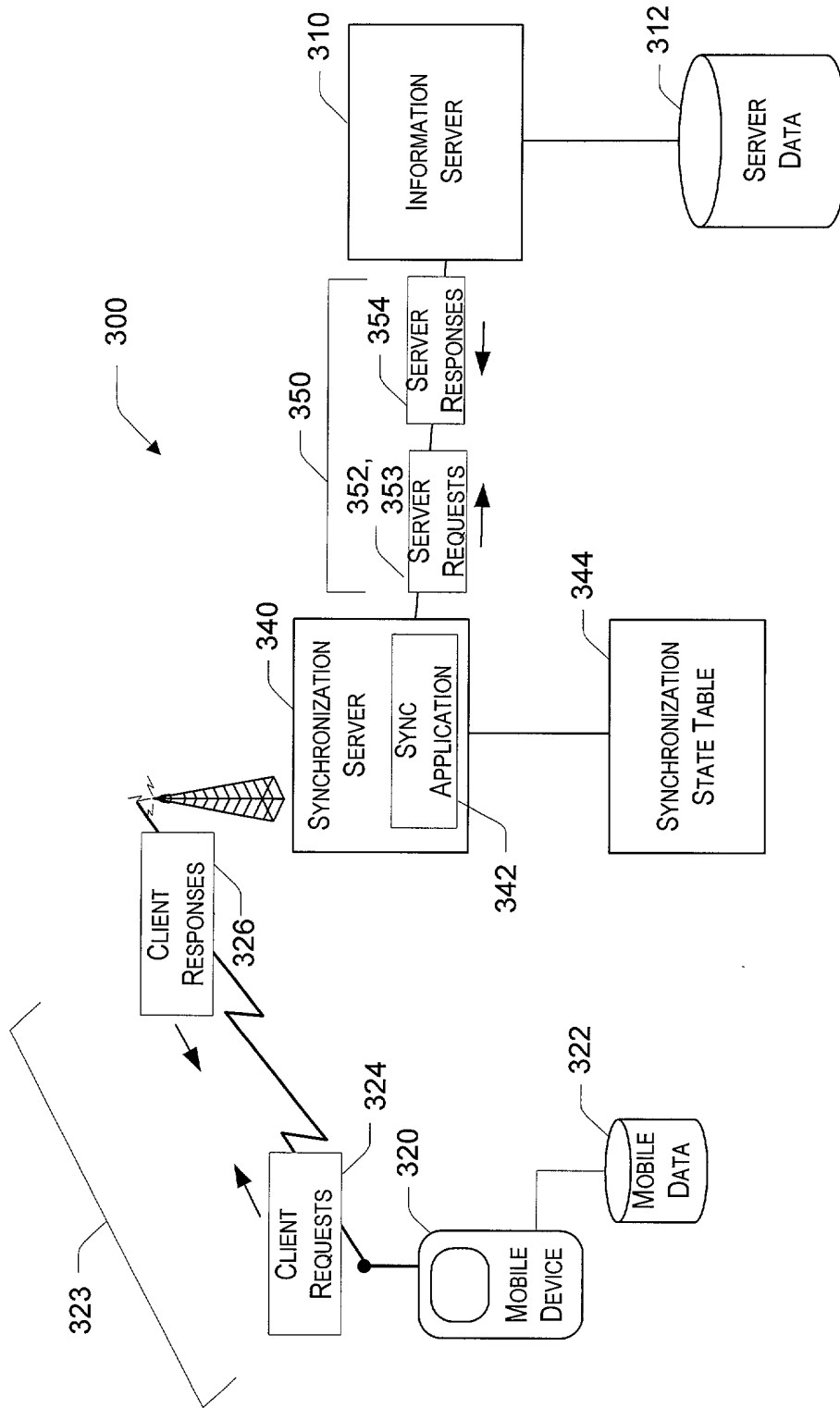


Fig. 3

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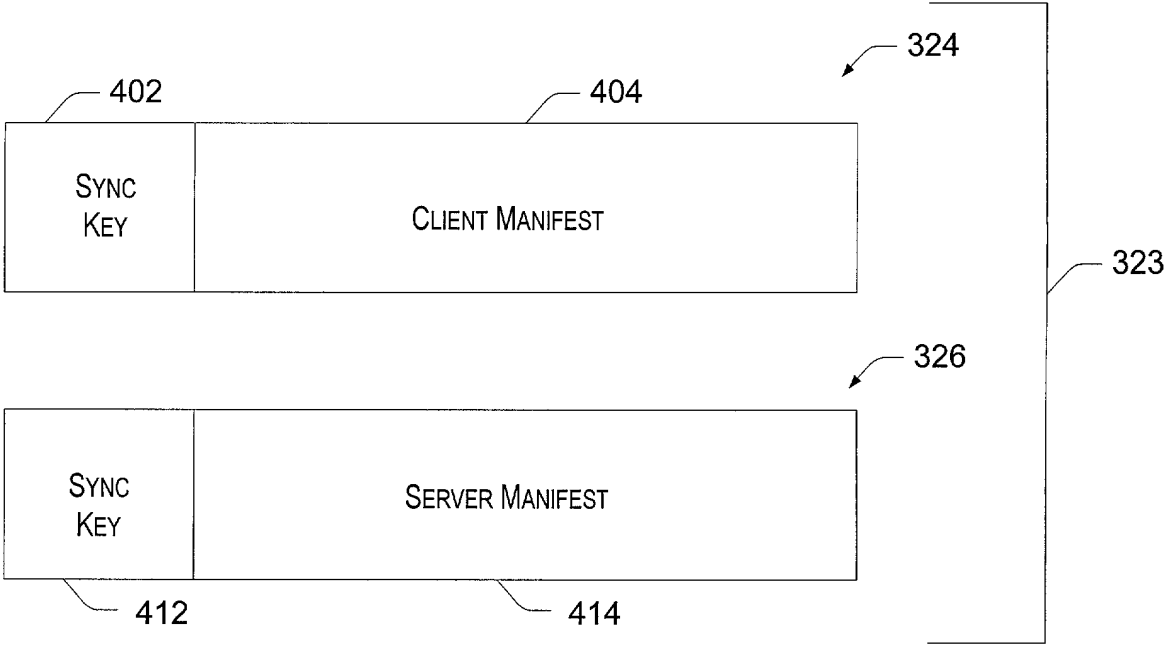


Fig. 4

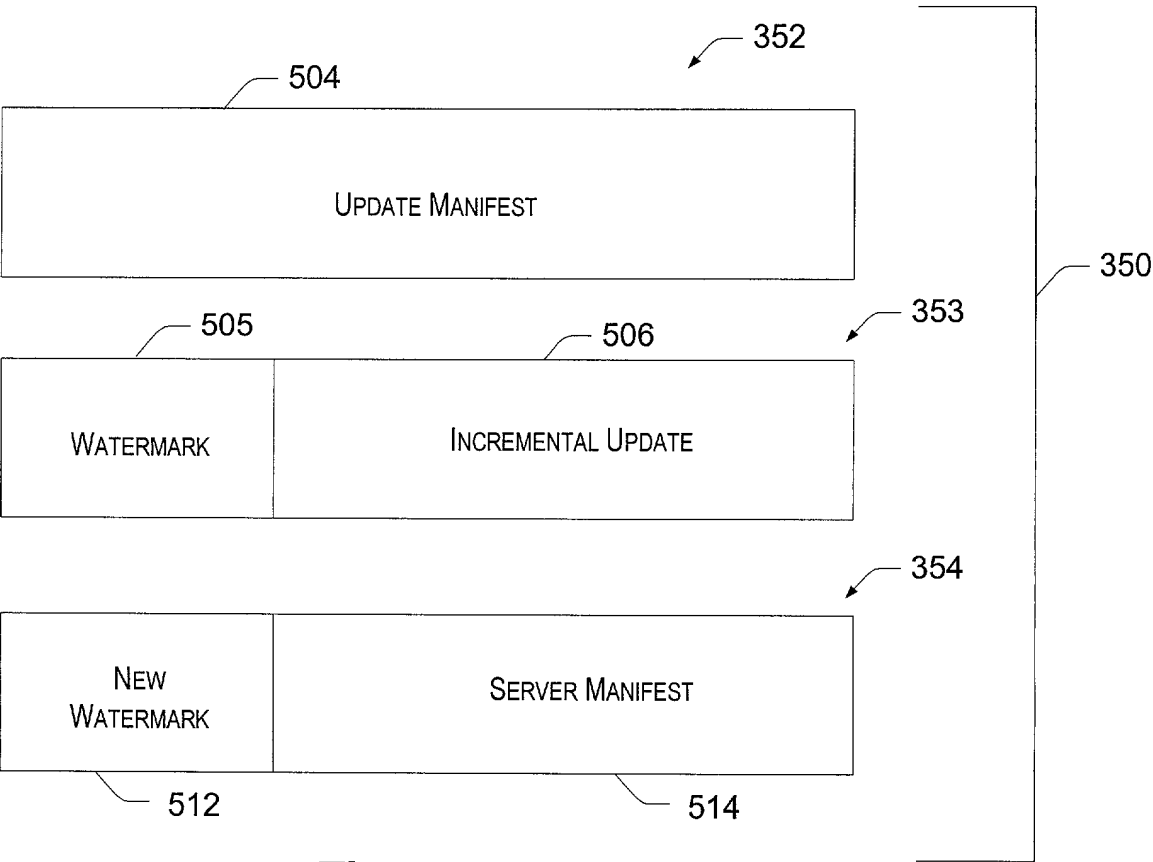


Fig. 5

**Fig. 6**

MANIFEST			
ACTION	OBJECT ID	PROPERTY	NEW VALUE
CHANGE	XXXX123	LAST MOD.	{NEW DATE}
DELETE	XXXX010	MESSAGE	{NULL}
CHANGE	XXXX747	READ FLAG	{READ}
CHANGE	XXXX362	MESSAGE	{POINTER}
DELETE	XXXXXXX	MESSAGE	{NULL}

600

601 603 605 607

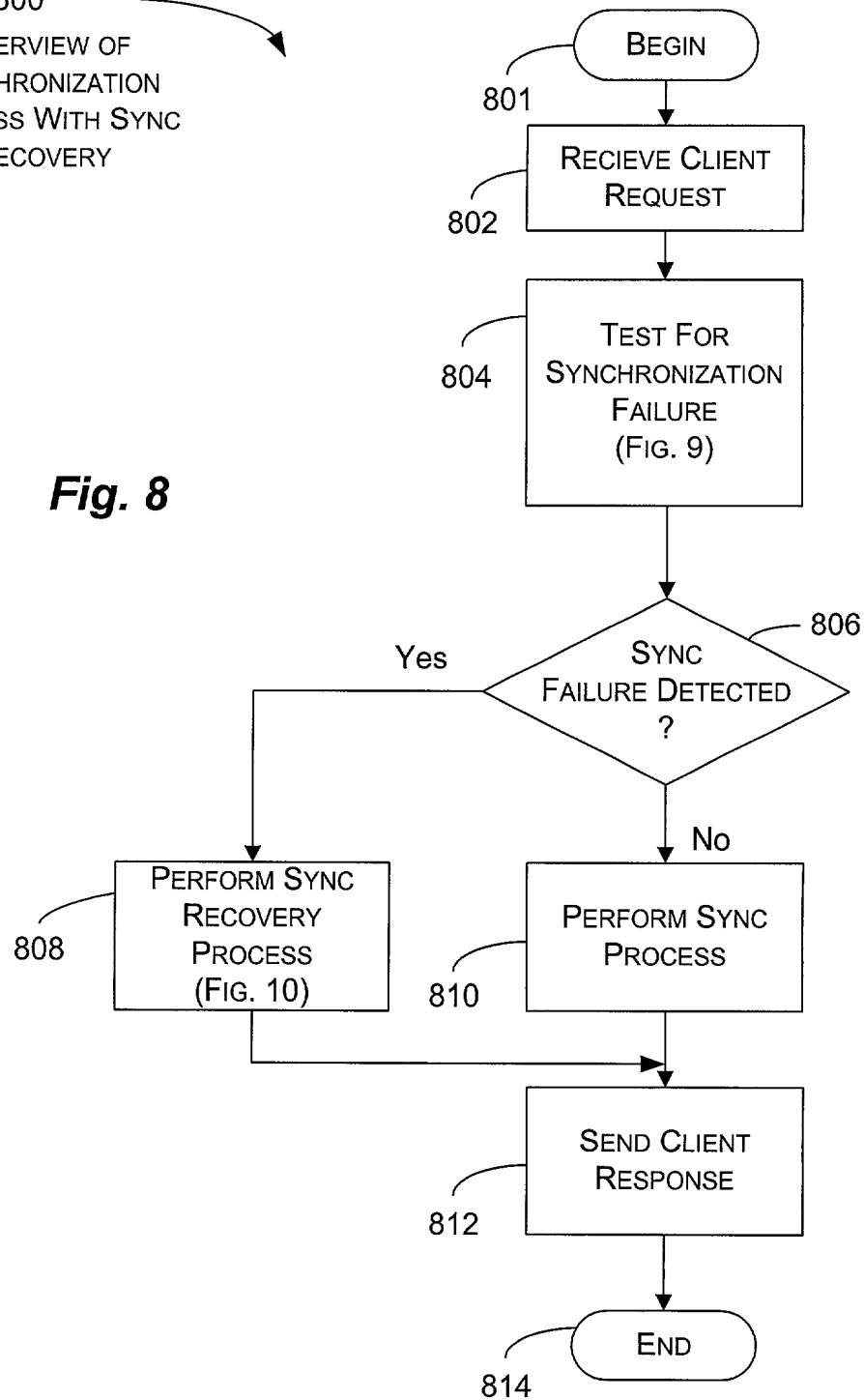
**Fig. 7**

SYNCHRONIZATION STATE TABLE	
LAST SYNC KEY	702
WATERMARK	704
PREVIOUS WATERMARK	706
LAST MANIFEST	708
PRIOR INCREMENTAL WATERMARKS	710

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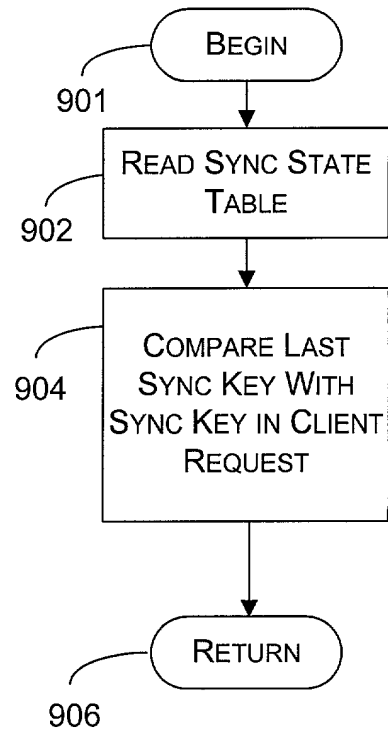
800  
OVERVIEW OF  
SYNCHRONIZATION  
PROCESS WITH SYNC  
RECOVERY

**Fig. 8**

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900  
PROCESS OF TESTING FOR  
SYNCHRONIZATION FAILURE

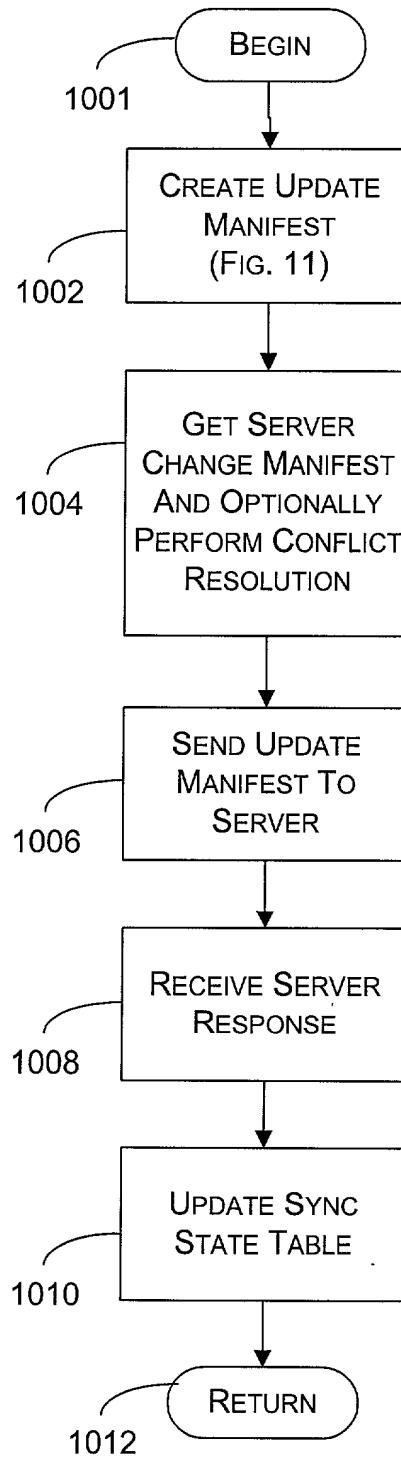
**Fig. 9**



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1000  
SYNCHRONIZATION  
RECOVERY PROCESS

**Fig. 10**



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1100	1102	1104	1106	1108	1110
	CASE	LAST SAVED MANIFEST	CURRENT MANIFEST	UPDATE MANIFEST	CRITERIA FOR CREATING THE UPDATE MANIFEST
1120	1	ADD	ADD	ADD OR CHANGE	IF SERVERID IN RST, RESUBMIT AS CHANGE. IF SERVER ID DOES NOT EXIST, SUBMIT THE ADD
1122	2	ADD	CHANGE	NONE	SEND ERROR TO CLIENT
1123	2.5	ADD	DELETE	NONE	SEND ERROR TO CLIENT
1124	3	ADD	OBJECT INEXISTENT	DELETE	NEWLY ADDED OBJECT IS DELETED, RESUBMIT AS DELETE
1126	4	DELETE	ADD	NONE	SEND ERROR TO CLIENT
1128	5	DELETE	DELETE	DELETE	SUBMIT AS DELETE, IN CASE SERVER FAILED PRIOR TIME
1130	6	DELETE	CHANGE	NONE	SEND ERROR TO CLIENT
1132	7	CHANGE	ADD	NONE	SEND ERROR TO CLIENT
1134	8	CHANGE	CHANGE	CHANGE	SUBMIT AS CHANGE IN ORDER TO UPDATE ANY DIFFERENCES
1136	9	CHANGE	DELETE	DELETE	SUBMIT AS DELETE
	10	DELETE	O-N-E	NONE	DO NOTHING (ERROR CASE; BUT NOTHING SENT TO THE CLIENT)
	11	CHANGE	O-N-E	NONE	DO NOTHING (ERROR CASE; BUT NOTHING SENT TO THE CLIENT)
	12	O-N-E	ADD	ADD	PERFORM THE NEW ADD OPERATION
	13	O-N-E	CHANGE	CHANGE	PERFORM THE NEW CHANGE OPERATION
	14	O-N-E	DELETE	DELETE	PERFORM THE NEW DELETE OPERATION

**Fig. 11**